

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY

MEETING OF OCTOBER 5, 1937

As previously announced there was no formal meeting. Members and guests indulged in informal discussions. Refreshments were served.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF OCTOBER 19, 1937

A regular meeting of the New York Entomological Society was held in the Roosevelt Memorial on October 19, 1937; President Curran in the chair with forty-three members and visitors present.

Mr. Raoul Nadeau was elected to active membership.

The program committee announced that at the November 16 meeting Dr. E. P. Darlington would speak on "The Biology of Cranberry Culture."

The meeting was given over to the entomological experiences of members during the summer. Mr. William T. Davis exhibited a family of *Panchlora cubensis* which he had kept for over a year. Dr. Payne told of grasshoppers girdling trees in the middle west.

We were once again honored by a visit from Dr. Arthur Gibson, who displayed some slides of the Laboratory at Belleville, Ontario.

Most of the members present contributed to the evening's general discussion.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF NOVEMBER 16, 1937

A regular meeting of the New York Entomological Society was held in Roosevelt Memorial on November 16, 1937; President Curran in the chair with forty-seven members and visitors present.

The program committee announced that at the next meeting Dr. A. L. Melander would speak on "Who's Who Among the Insects of 1937," illustrated with colored motion pictures.

Dr. Klots proposed Dr. A. Glenn Richards for active membership. By suspension of the by-laws Dr. Richards was elected immediately.

Mr. Robert Trout gave a very interesting survey of the biology of Zoraptera.

Dr. E. P. Darlington, the speaker of the evening spoke on "Blueberry and Cranberry Culture" and his abstract follows.

Byrley F. Driggers, while working at the White properties in New Lisbon, N. J., was first to describe the life history of the coleopterous stem-borer, *Oberca myops*. The only control for this insect is to pinch off the wilted shoots well below the circular row of egg punctures otherwise the larvæ bore down the cane into the root of the plant. Driggers also discovered that five species of flies were responsible for the blueberry gall, the most common being

Hermadas nubilipennis Ashmead. In 1920 and 1921 I worked on the life history of the blueberry tipworm *Contarinia vaccinii* Felt and furnished material for identification of this species which is Type A 3207 in the N. Y. State Museum.

Gelechia trialbamaculella Chambers, a leaf feeder, is common on both wild and cultivated blueberries.

Some years the fall webworm is quite numerous but it feeds in colonies and the nests are quite noticeable.

Of the *Datanas*, *drexelii* is the most common and as it also feeds in clusters it may readily be detected and destroyed.

The flannel moth *Lagoa crispata* often prefers tender leaves of blueberry to coarser leaves of oak.

In bulletin No. 275 of U. S. Dept. of Agric., Feb., 1932, F. H. Lathrop and C. B. Nickels review the work of previous years and give a detailed account of the biology and control of the blueberry maggot in Washington County, Maine.

In Maine, where all the berries go to the cannery, an arsenic dust may be used for control but in New Jersey this is not practical as all our berries are sold on the fresh fruit-market. Application of rotenone dust is made three times during the season by airplane or autogiro, early in the morning before the sun has risen enough to cause a breeze.

Rhagoletis mendax and *E. pomonella* are similar from egg to adult fly although separated as two species.

There are three, and probably more, blueberry fruit worms. Most common is the so-called cranberry fruit-worm *Mineola vacinii*. *Moodna ostrinella* Clemens is also a fruit worm on blueberries.

Laspeyresia packardii Zeller has been reared from blueberry fruit.

Pollination.—The blueberry is practically sterile to its own pollen so that it is necessary to have at least two distinctly related varieties in proximity to insure a good set of fruit. Bumblebees are better as pollenizers than honey-bees because of their longer tongues. The bumblebee just punctures the corolla and goes after the nectar.

Cranberries.

As early as 1850 some citizens of Medford, N. J., tried to develop the natural cranberry bog with the idea of improving the yield. All varieties produced today are but natural hybrids, originating in some patch of wild berries or from seeds in some commercial bog of mixed varieties.

On July 19, 1915, Harold B. Scammel, of the U. S. Department of Agriculture, published his paper on "The Cranberry Root Worm" (*Rhabdopterus picipes* Oliv.). On September 21, 1917, he published the result of his 4 years study of the cranberry girdler *Cranbus hortuellus*.

Cranberry fireworms.—Most common is the black headed *Rhopobato vaciniana* Packard. Next in importance is the cranberry yellow head, *Peronea minuta*.

In 1926 it was proven that the blunt nosed leaf hopper *Euseclis striatulus* transmitted disease.

LUCY W. CLAUSEN, *Secretary.*

MEETING OF DECEMBER 7, 1937

A regular meeting of the New York Entomological Society was held in Roosevelt Memorial on December 7, 1937; President Curran in the chair, with one hundred and thirty members and visitors present.

The program committee reported that Dr. William Sargent would exhibit paintings of Odonata at the December 21 meeting. Members were invited to add to the round-table discussion.

The resignation of Mrs. M. P. Comstock was accepted with regret.

A letter sent to Dr. Curran concerning the resolution of the American Association of Economic Entomologists to promote a closer bond between all branches of entomology was referred to the Executive Committee.

Dr. A. L. Melander, the speaker of the evening, then showed the Society colored motion pictures of insects going about their daily business.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF DECEMBER 21, 1937

A regular meeting of the New York Entomological Society was held in Roosevelt Memorial on December 14, 1937; President Curran in the chair, with forty visitors and members present.

At the next meeting of the Society the annual election of officers was scheduled. Dr. Curran appointed Mr. J. D. Sherman, Mr. E. L. Bell, and Dr. A. L. Melander to act as nominating committee.

Mr. Mutchler proposed for active membership Mr. Edwin W. Teale, 93 Park Ave., Baldwin, L. I., and Miss Lillian L. Davis, of Studio Club, 210 E. 77th Street, New York City.

Dr. William Sargent exhibited his paintings of Odonata and spoke upon some of the habits of dragon flies.

Dr. Herbert Ruckes spoke on the genus *Brochymena* upon which he is working.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF JANUARY 4, 1938

The annual meeting of the New York Entomological Society was held on January 4, 1938, in Roosevelt Memorial; President Curran in the chair with twenty-eight visitors and members present.

The report of the nominating committee was read by Mr. E. L. Bell. The secretary was empowered to cast one ballot for the election of new officers, as follows:

- President—Dr. William Moore
 Vice-President—Dr. H. T. Spieth
 Secretary—Lucy W. Clausen
 Treasurer—Paul T. Richard
 Librarian—Frank E. Watson
 Curator—Andrew J. Mutchler
 Executive Committee—William T. Davis
 Dr. F. E. Lutz
 Dr. William Proctor
 Herbert F. Schwarz
 Henry Bird
 Publication Committee—Harry B. Weiss
 Dr. C. H. Curran
 John D. Sherman
 Ernest L. Bell

Dr. Moore, the newly elected president, presided during the balance of the meeting.

Dr. Curran proposed a vote of thanks to the treasurer and secretary for the work they have done and for their interest in the Society.

Mr. H. F. Schwarz made a motion to thank the retiring president. These motions were adopted.

At the next meeting Mr. H. Dietrich of Cornell University will give an illustrated talk on "The Dutch Elm Disease."

Dr. Moore appointed as program committee Dr. Herbert Ruckes, Mr. Frank Soraci, and Dr. C. H. Curran.

LUCY W. CLAUSEN, *Secretary*.

MEETING OF JANUARY 18, 1938

A regular meeting of the New York Entomological Society was held on January 18, 1938, in Roosevelt Memorial; President Moore in the chair with forty-two members and visitors present.

Due to the absence of the secretary Mr. Kisliuk was appointed temporary secretary.

The program committee announced that on February 1 there would be a general discussion of notes by members led by Dr. H. T. Spieth.

Mr. J. C. Crawford was proposed for active membership by Mr. Kisliuk. A motion made by Dr. Horsfall to suspend the usual procedure and admit Mr. Crawford to immediate membership was adopted.

The speaker of the evening, Mr. Dietrich, then talked on "The Dutch Elm Disease." At the close of Mr. Dietrich's talk there was a general discussion.

The chairman announced the death in London of Major Ernest Austin. Major Austin was connected with the British Museum for a long time, having done considerable work with the tsetse fly as well as with other phases of general medical entomology.

ABSTRACTS OF TALK BY MR. H. DIETRICH

The name "Dutch Elm" disease is used because the disease was first reported from Holland in 1919. In 1922 Schwarz associated a fungus, *Graphium ulmi* with the dying of elms. The disease now occurs over about 1638 square miles in the New York metropolitan area. In this area over 27,000 elms affected with the disease have been destroyed.

How did the disease organism get to this country? Elm burl logs were being imported from Europe to be used for veneer. These logs were found to have both the fungus and the insect vectors. The logs entered at the ports of New York, Baltimore, Norfolk and New Orleans and were shipped to Chicago, Kansas City, Montana, Indianapolis, Cincinnati.

When *Graphium ulmi* gains entrance to the live part of an elm, the fungus seems to stop up the water tubes, although it may have a toxic effect. As a result the leaves droop and eventually turn brown and dry up. If one cuts into a diseased branch a brownish discoloration will be noted. This brown growth has to be cultured on agar plates to definitely identify the fungus. The fungus produces, in sheltered places such as insect galleries and pupal cells, fruiting bodies called coremia. Hence insects emerging from these pupal cells are likely to be covered with spores of *Graphium ulmi*.

In Europe two species of bark-beetles *Scolytus scolytus* and *Scolytus multi-*

striatus have been found to breed commonly in dead or dying elms. Fortunately only *S. multristriatus* has gained a foothold in this country.

Many other insects were reared from elm wood. Since *S. multristriatus*, however is the only elm insect known to feed regularly on the small branches it is generally accepted as the main vector of the Dutch Elm disease. In close stands of elm the fungus may go from one elm to another through root grafts.

Control

In this country all infected trees are immediately destroyed and the stumps killed. The major infected area is within 50 miles of New York City. The total number of diseased trees found in the following states during 1937 gives some idea of the magnitude of the work: New York, 1264; New Jersey, 4426; Connecticut, 113. The best control recommendations are still the same as are given in Cornell Extension Bulletin No. 290, June 1934, namely sanitation, cutting out of all dead elm wood fertilization and watering of all trees to make them more vigorous.

MAX. KISLIUK, *Sec. pro tem.*

MEETING OF FEBRUARY 1, 1938

A regular meeting of the New York Entomological Society was held on February 1, 1938, in Roosevelt Memorial; President Moore in the chair with thirty members and visitors present.

The program committee reported that Dr. John B. Schmitt of Rutgers University would speak at the next meeting on the "Feeding Mechanism of Moths and Butterflies."

There were two proposals for active membership—Dr. John B. Schmitt, Rutgers University, New Brunswick, New Jersey and Mr. William H. Bennett, State College of Forestry, Syracuse University, New York.

The meeting was then given over to a discussion of notes by members.

LUCY W. CLAUSEN, *Secretary.*

MEETING OF FEBRUARY 15, 1938

A regular meeting of the New York Entomological Society was held on February 15, 1938 in Roosevelt Memorial; President Moore in the chair with fifty visitors and members present.

The program committee announced that Messrs. Bruce and Sheridan Fahnestock would speak at the next meeting.

There were two elections to active membership—Dr. John B. Schmitt and Mr. William Bennett.

Mr. Robert Rosenbaum, 340 W. 86th Street, New York City was proposed for active membership.

The speaker of the evening Dr. John B. Schmitt then spoke on "The Feeding Mechanism of Moths and Butterflies."

Summary of Dr. Schmitt's Talk:

1. The coiled proboscis of Lepidoptera is extended by means of blood pressure created in the stipes of each maxilla. This pressure is caused by three pairs of muscles, which by their contraction press the stipes against the head wall. Two pairs of these muscles arise on the anterior arms of the tentorium and the third pair arises on the gena.

2. The sucking pump is a compound organ derived from the pharynx, the buccal cavity, and the cibarium. This is evidenced by these facts: (1) true pharyngeal dilators are inserted only in the posterior part of the pump; (2) muscles homologous with the compressors of the labrum are present in some Lepidoptera; and (3) the dorsal salivarium muscles arise on the pump floor, showing that the hypopharynx forms at least the anterior part of the floor.

3. There is no labial musculature except that of the palpi. There are generally two pairs of palpus muscles, but in many families only one pair, or none at all, may be found.

4. The area posterior to the labial palpi is bounded by the hypostoma, the hypostomal ridge offering an insertion for the ventral segmental muscles. A hypostomal bridge is sometimes present.

5. The anterior arms of the tentorium are well developed but lack dorsal arms. The posterior tentorial bridge is short and weak. The great length of the hypostoma in Lepidoptera elevates the tentorium to a higher position in the head, with respect to other cephalic structures, than is common.

6. The antennal muscles arise on the anterior arms of the tentorium and vary in number from one to five pairs. They are always well developed, sometimes at the expense of other head structures and, in moths with obsolete feeding structures, are often the only functional muscles within the head.

LUCY W. CLAUSEN, *Secretary*.

CORRECTION

Volume XLV, p. 409: The reference to Professor Brunner should have been to Prof. Lawrence Bruner, who died in Berkeley, California, January 30, 1937.